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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 36

Application Number: 08/894,824
Filing Date: August 29, 1997
Appellant(s): FRIEBE ET AL.

Theodore Gottlieb
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed June 3, 2002.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is incorrect since it indicates that claim 4 is not pending. A correct statement of the status of the claims is as follows:

This appeal involves claims 1 to 3, 6, 8 to 10 and 13.

Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is substantially correct. The Examiner notes, however, that the compound c) as claimed is in fact limited to the specific formula found in claim 1 or esters of polyphosphoric acid.

(6) Issues

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows: The rejection over Schiller et al. in view of Sattlegger et al. has been withdrawn, and thus the sole issue is the rejection over Eck et al. in view of Sattlegger et al.

(7) Grouping of Claims

The rejection of claims 1 to 3, 6, 8 to 10 and 13 stand or fall together.

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

5063087	Eck et al.	11-1991
4434283	Sattlegger et al.	2-1984

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1 to 3, 6, 8 to 10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eck et al. in view of Sattlegger et al.

Eck et al. teach the treatment of inorganic carbonate substances, such as chalk, with a phosphorus containing organosilicon compound meeting the claimed component c) when R^3 is a silyl containing group. Chalk is appellants' preferred basic filler b). Col-

umn 5 teaches that these treated fillers can be used in combination with thermoplastic or thermosetting organopolysiloxane compositions. Specific attention is drawn to the composition prepared in Example 12 on the bottom of column 8. This contains components corresponding to claimed components a), b), c) and e). (Note filler (3) on lines 33 and 34 of column 8). This differs from that claimed only in that Eck et al. use a oxime crosslinking agent and not an alkoxysilane crosslinking agent as found in component d) of claim 1. [1]

As one having ordinary skill in the silicone art would recognize, alkoxysilane and oximosilane crosslinking agents are commonly used in the alternative with one another in condensation curable silicone compositions. This is because the alkoxy groups and the oximo groups are both condensable groups that react with terminal SiOH groups in a comparable manner to form a cured product.

For instance note the teachings of Sattlegger et al. Patentees teach a composition that is condensation curable via the reaction between terminal SiOH groups and a silane crosslinking agent. This is the same type of cure mechanism used in the composition shown by Eck et al. As can be seen on column 2, lines 32 to 42, the reactive group X can be either alkoxy or an oxime group. That is, Sattlegger et al. teach that the alkoxy and oxime condensable groups can be used in an equivalent manner to form a curable silicone composition. In this manner, the alkoxy and oxime groups are considered to be functional equivalents.

Thus one having ordinary skill in the art would have been motivated by the expectation of comparable results to substitute the oxime crosslinker in Eck et al. with an alkoxy silane crosslinker such as claimed. Note that it is prima facie obvious to sub-

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[1] The Examiner notes that Example 12 does not specifically state that the oxime based crosslinking agent is an oximosilane, and the Examiner has been unable to find another anything about crosslinking agent BO 30. However, one having ordinary skill in the art would have readily recognized that the oxime crosslinker in Eck et al. is an oxime silane crosslinker since patentees are forming an organopolysiloxane elastomer (as referenced on column 5, line 57) and silane crosslinkers are what one uses in condensation curable silicone compositions such as that in Eck et al. Appellants have never traversed the fact that the oxime based crosslinker in Eck et al. is a silane crosslinker and thus the Examiner assumes that appellants acquiesce this point. Similarly, Eck et al. never state that the catalyst is an organic titanium or an organic tin compound, but again the skilled artisan would have readily recognized that organic titanium and organic tin compounds are conventional catalysts for such a reaction and would have expected catalyst 41 to be an organic tin or titanium catalyst. Again, the Examiner has been unable to find any

stitute equivalents, motivated by the reasonable expectation that the respective species will behave in a comparable manner or give comparable results in comparable circumstances. The express suggestion to substitute one equivalent for another need not be present to render the substitution obvious.

As such, the skilled artisan would have found the use of an alkoxysilane crosslinking agent instead of the oxime crosslinking agent found in Eck et al. to have been obvious. In this manner the instant claims are rendered obvious. Note for instance that Sattlegger et al. use in Example 1 a tetraethoxysilane and an organic tin catalyst.

On the other hand, note claim 25 in Eck et al. which states that the substance that can be crosslinked to form a polymer (to which the phosphorus compound and the inorganic carbonate adheres, for instance the organopolysiloxane elastomer) can be crosslinked by tetraethylsilicate (meeting claimed component d)). Thus one having ordinary skill in the art would have been motivated to use a tetraethylsilicate crosslinking agent to form a crosslinked polysiloxane in the composition of Eck et al. In this manner too, the instant claims appear obvious.

(11) Response to Argument

Appellants' traversal of this rejection has been considered, but is not deemed sufficient to render the instant claims unobvious. Specifically, appellants rely heavily in their arguments on the showings in Table III of Eck. However, a closer review of Table III shows that the compositions tested therein were those of Examples (f), (g), (10) and (11). These are NOT compositions within the breadth of Example 12, which is the example in Eck et al. that contains the siloxane composition, the example referred to in the obviousness rejection and obviously, the closest prior art. Arguments drawn to the properties of an ethylene/vinyl acetate copolymer composition carry no weight in the obviousness of a siloxane composition. Appellants' arguments never once address the results in Table IV, which is the only table pertinent to this situation.

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information on catalyst 41, but the Examiner notes that appellants do not traverse the fact that catalyst 41, used in Eck et al., meets claimed component e). As such, the Examiner assumes that appellants acquiesce this point.

While appellants do remark upon the instant compositions' stability when stored for 10 weeks at 50 C°, this cannot be directly compared to the results shown in Table IV, which show results after storage for four weeks at 70 C°.

As such, arguments drawn to or relying upon the alleged improved results carry little weight. The Examiner notes that appellants have failed to compare the claimed invention to the closest prior art, which is clearly Example 12 in Eck et al. Appellants have not even provided a specific traversal to the rationale for the obviousness rejection; i.e. the obviousness of using a known silicone crosslinking agent such as an alkoxysilane within the breadth of claimed component d), for the oxime crosslinking agent shown in Eck et al.

Appellants conclude that (a) their evidence shows superior results, (b) the prior as noted supra, art provides no suggestion that they can be combined and c) combining Sattlegger with the inferior composition of Eck would likely render Sattlegger less satisfactory for it's intended purpose. With regards to (a), the Examiner has detailed that there is no persuasive showing of superior results. With regards to (b) the express suggestion to substitute one equivalent for another need not be present to render the substitution obvious and obviousness does not require absolute predictability, although at least some degree of predictability is required. Clearly one having ordinary skill in the art would have had a reasonable expectation of success in substituting one known crosslinking agent for SiOH containing siloxanes for another. Finally, with regards to c), one need not combine Sattlegger with the "inferior composition" of Eck et al. to arrive at the claimed composition; one must merely recognize the obviousness of using one known silane crosslinking agent for another. This combination in no way renders Sattlegger less satisfactory for its intended purpose since this reference is not the primary reference; it is not Sattlegger that is being modified.

In view of such weak and misguided arguments, the Examiner is maintaining the grounds for this rejection.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,
Margaret G. Moore
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mgm
May 12, 2003

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